REMARKS

Applicant has carefully reviewed and considered the Final Office Action mailed on August 10, 2005 and subsequent Advisory Action dated November 4, 2005, and the references cited therewith.

Claims 1, 10, 17, 23, 29, 30 and 31 are amended, no claims are canceled, and no claims are added; as a result, claims 1 and 3-34 are now pending in this application.

§102 Rejection of the Claims

Claims 1, 3-7, 17-22, 29 and 30 were rejected under 35 USC §102(b) as being anticipated by Hella (DE 4440064). Applicant respectfully traverses the rejection for the following reasons.

Applicant submits that the Hella reference appears to describe a circuit for applying voltage to electrical loads in motor vehicles. (See, Title and Abstract). The title of the Hella reference refers to "excitation of electrical loads." The Abstract of the Hella reference refers to "bridge circuits" with "load switch[es]." Figure 1 of the Hella reference appears to illustrate that each of the bridge circuits (B1, B2, B3, and B4) has an X output and a Y output. As shown in Figure 2, the X output appears to be determined by 1 and 2 of the VN and the Y output appears to be determined by 3 and 4 of the VN. The VN is a "linking network" that appears to act as a controller as it drives "the state of the load." (See, Abstract).

In contrast, Applicant believes that the present invention as claimed in independent claims 1, 4, 17, and 29, differ from the Hella reference as described below.

Independent claim 1, as previously presented, recites in part "a second configuration in which the high switch and the low switch are each configured as a discrete switch where the high switch is coupled as a first component switch to a component and the low switch is coupled as a second component switch to a different component, the second configuration being different than the first configuration."

Applicant respectfully disagrees with the characterization of pins 1 and 2 in the Hella reference as components. It appears that pins 1 and 2 are control terminals on VN, which appears to be a controller. (Figure 1). Thus, the Hella reference does not show a high switch is coupled as a first component switch to a component and

the low switch is coupled as a second component switch to a different component. Furthermore, in the Hella reference the high switch T1 and the low switch T2 are commonly connected to the X output. (Figure 2). This common connection prevents the high switch and the low switch from being "each configured as a discrete switch", as recited in claim 1. Similarly, in the Hella reference the high switch T3 and the low switch T4 are commonly connected to the Y output (Figure 2) and cannot be each configured as a discrete switch, as recited in claim 1.

Independent claim 4, as previously presented, recites in part "a configurable first H-bridge circuit that includes a first configuration as a first motor drive circuit to drive a first motor, and includes a second configuration as discrete switches, each of the discrete switches configured to be coupled to independent components."

As explained in connection with claim 1, when the four switches (T1, T2, T3, and T4) connect through the two outputs (X and Y), as shown in the Hella reference, the switches are not as discrete switches. (Figure 2). Furthermore, Applicant respectfully disagrees with the characterization that Figure 1 of the Hella reference shows discrete switches coupled to independent components. It appears that the X and Y outputs in the Hella reference are connected to other X and Y points. From the Applicant's review of Hella it does not appear that these other X and Y points are independent components. (Figure 1).

Independent claim 17, as currently amended, recites in part "writing an indicator to a configuration register to indicate an implementation of a configurable H-bridge circuit as at least one of a motor drive circuit or as discrete switches" and recites "coupling a discrete switch of the configurable H-bridge circuit as a component switch in an event that the configurable H-bridge circuit is implemented as the discrete switches".

As explained in connection with claim 1, when the four switches (T1, T2, T3, and T4) connect through the two outputs (X and Y), as shown in the Hella reference, the switches are not discrete switches. (Figure 2). Further, Hella's connections between the X and Y outputs to other X and Y points do not appear to describe " coupling a discrete switch of the configurable H-bridge circuit as a component switch", as recited in independent claim 17.

Independent claim 29, as previously presented, recites in part instructions that, when executed, direct a printing device to "configure the configurable H-bridge

circuit in a second configuration as the discrete switches in an event that a switch of the configurable H-bridge circuit is to be implemented as a component switch."

As explained in connection with claim 1, when the four switches (T1, T2, T3, and T4) connect through the two outputs (X and Y), as shown in the Hella reference, the switches are not discrete switches. Further, Hella's connections between the X and Y outputs to other X and Y points do not appear to describe an H-bridge "implemented as a component switch", as recited in independent claim 29.

As such, Applicant respectfully submits that the Hella '064 reference does not contain each and every element and limitation of the above claims. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections based on the Hella '064 reference for independent claims 1, 4, 17, and 29, as well as those claims which depend therefrom.

Claims 1 and 3 were also rejected under 35 USC §102(b) as being anticipated by Hella (EP 0833437). Applicant respectfully traverses the rejection for the following reasons.

Applicant submits that the Hella (EP 0833437) (hereinafter '437) reference appears to describe a "driver circuit element [that] has individual quarter bridge drivers." (See, Abstract). In contrast, Applicant believes that the present invention as claimed in independent claim 1 differs from the Hella '437 reference as described below.

Independent claim 1, as previously presented, recites in part "a first configuration of the high switch and the low switch connected together and coupled to independently drive a motor as an H-bridge circuit."

The Hella '437 reference shows interior quarter bridge drivers, which are different from switches connected together "as an H-bridge circuit," as recited in independent claim 1. Further, the interior quarter bridge drivers of the Hella '437 reference are connected to common terminals so that each common terminal affects two motors. (Figure 1). The circuit in the Hella '437 reference is not configured to "independently" drive a motor, as recited in independent claim 1.

As such, Applicant respectfully submits that the Hella '437 reference does not contain each and every element and limitation of claim 1. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections based on the Hella '437 reference for independent claim 1 as well as claim 3 which depends therefrom.

§103 Rejection of the Claims

Claims 8 and 9 were rejected under 35 USC §103(a) as being unpatentable over Hella (DE 4440064) in view of Hella (EP 0833437). Applicant respectfully traverses the rejection as follows.

As noted above, Applicant submits that the Hella (DE 4440064) (hereinafter '064) reference appears to describe a circuit for applying voltage to electrical loads in motor vehicles. Further, as noted above, Applicant submits that the Hella (EP 0833437) (hereinafter '437) reference appears to describe a "driver circuit element [that] has individual quarter bridge drivers." (See, Abstract).

Applicant's independent claim 4, as previously presented, recites in part:

> a configurable first H-bridge circuit that includes a first configuration as a first motor drive circuit to drive a first motor, and includes a second configuration as discrete switches, each of the discrete switches configured to be coupled to independent components

For the reasons presented above, Applicant respectfully submits that the Hella '064 reference does not describe, teach, or suggest each and every element of Applicant's independent claim 4.

From the Applicant's review, the Hella '437 reference does not cure the deficiencies of the Hella '064 reference. Applicant respectfully disagrees with the characterization of the circuit in the Hella '437 reference as having H-bridge circuits. The Abstract of the Hella '437 reference describes the parts of the circuit as "quarter bridge drivers" and not as "H-bridge circuits".

As such, Applicant respectfully submits that neither the Hella '064 reference nor the Hella '437, either independently or in combination, describe, teach, or suggest each and every element and limitation of the Applicant's independent claim 4. Claims 8 and 9 depend from allowable independent claim 4. Accordingly, reconsideration and withdrawal of the 103 rejection for claims 8 and 9 based on the above references is respectfully requested.

Claims 10, 14, 15, 23-25 and 31-34 were rejected under 35 USC §103(a) as being unpatentable over Barrus (U.S. Patent No. 6,082,914) in view of Hella (EP 0833437).

The Barrus reference appears to describe printers in which "a print ribbon [is] driven and matched to the underlying media." (Column 1, Lines 7-16). The Hella '437 reference appears to describe a "driver circuit element [that] has individual quarter bridge drivers." (See, Abstract).

In contrast, Applicant believes that the present invention as claimed in independent claims 10, 23, and 31, differ from these references independently and in combination for the reasons described below.

Independent claim 10, as currently amended, recites in part "a multiple H-bridge circuit including: a first H-bridge circuit configured to independently drive the first motor; a second H-bridge circuit configured to independently drive the second motor; and a third H-bridge circuit that includes a first configuration as a motor drive circuit to independently drive a third motor."

Independent claim 23, as currently amended, recites in part "controlling a first movable component in a printing device with a first motor independently driven by a first H-bridge circuit of a multiple H-bridge circuit; controlling a second movable component in the printing device with a second motor independently driven by a second H-bridge circuit of the multiple H-bridge circuit; configuring a third H-bridge circuit of the multiple H-bridge circuit in a first configuration to independently drive a third motor."

Independent claim 31, as currently amended, recites in part "means to independently drive a first motor to control a first movable component in a printing device; means to independently drive a second motor to control a second movable component in the printing device; means to configure a configurable first H-bridge circuit in a first configuration as a motor drive circuit to independently drive a third motor."

Support for the above claim language can be found in the Applicant's specification, as originally filed, on page 1, paragraph 3, which reads "an H-bridge circuit structure that enables a microprocessor or controller to independently control each motor in an imaging device", among other locations.

The Barrus reference appears to show H-bridge drivers. However, as the Examiner notes, Barrus does not describe H-bridges used as discrete switches.

(Figure 4). Further, the Applicant has shown that the Hella '437 reference only appears to describe "quarter bridge drivers" and not "H-bridge circuits", as recited in independent claims 10, 23, and 31.

Applicant respectfully submits that there is no suggestion or motivation to combine the quarter bridge drivers of the Hella '437 reference with the H-bridge drivers of the Barrus reference. That is, there is no description, teaching, or suggestion from within either of the references to substitute H-bridge drivers for quarter bridge drivers.

Further, Applicant respectfully submits that the Hella '437 reference teaches away from its combination with the Barrus reference in that the Barrus reference appears to show separate H-bridge drivers, with separate terminals, so that each H-bridge driver affects one spool motor. (Figure 4).

In contrast, as noted above, the Hella '437 reference shows interior quarter bridge drivers connected to common terminals so that each common terminal affects two motors. (Figure 1). The circuit in the Hella '437 reference is not configured to "independently" drive each motor, as recited in independent claims 10, 23, and 31.

As a result, the Hella '437 reference teaches away from combining its commonly connected quarter bridge motor drivers with the separate H-bridge motor drivers of the Barrus reference. Thus, independent claims 10, 23, and 31 would not have been obvious to one of ordinary skill in the art.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections of independent claims 10, 23, and 31 in view of the above references, as well as the claims which depend therefrom.

Claims 11-13, 16, and 26-28 were rejected under 35 USC §103(a) as being unpatentable over Barrus (U.S. Patent No. 6,082,914) and Hella (EP 0833437) as applied to claims 10 and 23 above, further in view of Hella (DE 4440064).

Claims 11-13, 16 depend from allowable claim 10 and claims 26-28 depend from allowable claim 23. As the Applicant has shown neither the Barrus, Hella '437, nor Hella '064, either independently or in combination, describe, teach or suggest each and every element and limitation of these independent claims.

As such, Applicant respectfully requests reconsideration and withdrawal of the rejections of claims 11-13, 16, and 26-28 in view of the above references.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney Gregg W. Wisdom at (360) 212-8052.

At any time during the pendency of this application, please charge any additional fees or credit overpayment to the Deposit Account No. 08-2025.

CERTIFICATE UNDER 37 CFR §1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: **MS RCE** Commissioner for Patents, P.O. BOX 1450 Alexandria, VA 22313-1450, on this 10th day of November, 2005.

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